

S.N. 10/018,515

## REMARKS

Applicants acknowledge receipt of the 2nd Action of 19 FEB. 2003 and request reconsideration of the claims, as amended.

Independent claims 1, 2 and 3 have been amended to recite the feature that intermittent "injection" or spraying occurs when the valve is opened at 1. This feature is supported in the specification at page 15, lines 19-26.

As shown in the drawings, downstream from the main aerosol valve, a piston 5 is automatically pushed back and forth by a pair of opposing springs 7 and 8, throttling the flow of liquid being sprayed, so that the injection is intermittent rather than continuous. This is explained in detail at pages 16-17. The cited art completely fails to teach or suggest an automatic mechanism for turning a sprayer ON/OFF multiple times per second.

The First Action contended that "One having ordinary skill in the art would have been expected to determine the optimum time through routine experimentation" and the present action completely ignores the "intermittent" feature, suggesting that it has been accorded no patentable weight. However, this is a very important feature of the present invention, since, as pointed out at specification page 2, line 25, a person would have to exhaust his button finger, in order to manually turn a spray ON/OFF multiple times per second to avoid the "freezing sensation" which a continuous spray would produce on the skin. In all likelihood, most people would lack the coordination and stamina needed to even approach the performance of an automatic intermittent valve. In fact, trying to spray intermittently would not occur to most.

## REJECTIONS UNDER SECTION 102(b)

Paragraph 2 of the Official Action rejected all the claims as "anticipated" by JP 07-187 262 (KUBO et al./SANKYO) on the grounds that KUBO discloses a sprayer with a button. However,

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KUBO, as indicated in the "Patent Abstracts of Japan" summary submitted herewith, is directed to a mechanism for inverting a container of sterilizing fluid (mousse) to dispense it onto the user's hand, for example in a hospital where doctors and nurses must "scrub" before an operation. There is nothing to suggest that the container contents are under pressure or spray at all, much less spray intermittently. Thus KUBO fails to anticipate or suggest the subject-matter of main claims 1-3.

Furthermore, KUBO does not mention any propellant or any other "active ingredients" so there is nothing to suggest the additional features recited in the present dependent claims 8-21. Reconsideration, and withdrawal, of the rejection based on KUBO is solicited.

Paragraph 3 of the Office Action rejects all of the claims as "anticipated" by TUBAKI/YOSHINO KOGYOSHO CO. LTD. (USP 5,328,062) on the grounds that TUBAKI "teaches an aerosol sprayer with an injection button." From the foregoing discussion, it should be apparent that Applicants are claiming something much more specific than an aerosol sprayer with an injection button.

TUBAKI is directed to preventing clogging of the discharge path by dried particles of the material being sprayed, e.g. paint. The examiner is doubtless familiar with the type of aerosol paint can which one shakes before using, so that balls inside can rattle around and dislodge any dried particles in the discharge path. Such balls are shown at 23a in FIG. 1, at 140 in FIG. 10, and at 217 in FIG. 13.

TUBAKI is apparently not concerned with spraying onto skin, so it is not surprising that no mention is made of intermittent spraying, but less of a mechanism for automatically cycling spraying ON/OFF multiple times per second. It is respectfully submitted that TUBAKI fails to teach or suggest the intermittent injection system recited in main claims 1-3, much less any specific ON/OFF duty cycle of such an intermittent mechanism.

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Furthermore, TUBAKI fails to mention any of the combinations of propellant and other "active ingredients" recited in claims 8-21, so those claims also patentably distinguish over TUBAKI. Reconsideration, and withdrawal, of the section 102 rejection based on TUBAKI is solicited.

## CONCLUSION

Claims 1-3 and 5-21 are directed to a novel and useful intermittent injection system, particularly adapted to applying active ingredients to human skin, which is neither suggested or made obvious by the art of record. It is respectfully submitted that the claims patentably distinguish over KUBO, TUBAKI, KURZ, and the other art of record, taken singly or in combination. Allowance of the claims, and passage to issue, are solicited.

No additional claims fee or extension fee is believed required; if any is required, please charge to Deposit Account 23-0442.

If the Examiner notes any remaining informalities in the application, or wishes to make any suggestions to place the application in condition for allowance, he is invited to telephone the undersigned.

Respectfully submitted,

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Enclosure: KUBO et al./SANKYO (Patent Abstracts of Japan, 2 pp.)  
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